

WHAT IS CLAIMED IS:

1. A dielectric device comprising:

5 such a first electrode layer that constituent
elements located on its surface are terminated by halogen
atoms; and

a dielectric film formed on the surface of said first
electrode layer terminated by said halogen atoms.

10 2. The dielectric device according to claim 1,
wherein

said first electrode layer contains at least one
element selected from a group consisting of Pt, Ir, Pd and
Ru.

15 3. The dielectric device according to claim 1,
wherein

said halogen atoms are fluorine atoms.

20 4. The dielectric device according to claim 3,
wherein

said first electrode layer contains Pt, and
platinum fluoride is formed on the surface of said
first electrode layer.

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5. The dielectric device according to claim 1,
wherein

said dielectric film includes a ferroelectric film
having a bismuth layer structure.

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6. The dielectric device according to claim 5,
wherein

said ferroelectric film having a bismuth layer
structure is an $\text{SrBi}_2\text{Ta}_2\text{O}_9$ (SBT) film.

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7. The dielectric device according to claim 5,
wherein

a bismuth layer is formed to be substantially
perpendicular to said first electrode layer in said
ferroelectric film having a bismuth layer structure.

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8. The dielectric device according to claim 1,
further comprising a second electrode layer formed on said
dielectric film.

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9. The dielectric device according to claim 1,
further comprising an adherent layer formed under said
first electrode layer.

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10. The dielectric device according to claim 9,

wherein

said adherent layer includes an IrSiN film.

11. A method of manufacturing a dielectric device
5 comprising steps of:

terminating constituent elements located on the
surface of a first electrode layer by halogen atoms; and
forming a dielectric film on the surface of said
first electrode layer terminated by said halogen atoms.

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12. The method of manufacturing a dielectric device
according to claim 11, wherein

said step of terminating said constituent elements by
said halogen atoms includes a step of exposing the surface
15 of said first electrode layer into either a plasma or a
solution containing halogen ions thereby terminating said
constituent elements located on the surface of said first
electrode layer by said halogen atoms.

20 13. The method of manufacturing a dielectric device
according to claim 11, further comprising a step of
performing heat treatment after formation of said
dielectric film thereby crystallizing said dielectric film.

25 14. The method of manufacturing a dielectric device

according to claim 11, wherein
said halogen atoms are fluorine atoms.

15 15. The method of manufacturing a dielectric device
according to claim 14, wherein
said first electrode layer contains Pt, and
platinum fluoride is formed on the surface of said
first electrode layer.

10 16. The method of manufacturing a dielectric device
according to claim 11, wherein
said step of forming said dielectric film includes a
step of forming a ferroelectric film having a bismuth
layer structure.

15 17. The method of manufacturing a dielectric device
according to claim 16, wherein
said ferroelectric film having a bismuth layer
structure is an $\text{SrBi}_2\text{Ta}_2\text{O}_9$ (SBT) film.

20 18. The method of manufacturing a dielectric device
according to claim 16, wherein
said step of forming said ferroelectric film having a
bismuth layer structure includes a step of forming said
25 ferroelectric film having a bismuth layer structure so

that a bismuth layer is substantially perpendicular to
said first electrode layer.

19. The method of manufacturing a dielectric device
5 according to claim 11, further comprising a step of
forming a second electrode layer on said dielectric film.

20. The method of manufacturing a dielectric device
according to claim 11, further comprising a step of
10 forming an adherent layer under said first electrode layer.

21. The method of manufacturing a dielectric device
according to claim 20, wherein

said adherent layer includes an IrSiN film.

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